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THE IMPACT OF THE MERGER LAW WAVE ERA (2012–2015) IN THE PERFORMANCE OF
COMMERCIAL BANKS IN NEPAL

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Abstract

This empirical research studies the impact in the performance of privately-owned 'Class A' banks in Nepal (2012-2015) after the banks' merger laws (2011) in Nepal, assessing the systemic performance regardless of bank's merger status. The data was sourced from the Central Bank of Nepal. The research adopted a multiple linear regression analysis to assess the impact of relevant indicators on the performance (e.g. profitability). The analysis shows that non-performing loans have a negative and significant impact on performance, whereas net interest margin has positive and significant impact. Another relevant conclusion is that, capital adequacy ratio, statutory liquidity ratio and bank size have positive effect, although not statistically significant to impact the performance. Finally, banks are highly dependent on interest income, and despite high liquidity levels, non-performing loans negatively impact the performance, which seems the result of not complying with prudent risk management approach to drive performance, and protect stakeholders.

Key words:

Nepal, banks' performance, merger, financial stability

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1. Introduction

Evaluation of performance of commercial banks routinely has been crucial to ensure the financial stability, and many central banks or other financial institutions are increasingly applying standard framework for assessing financial stability and publishing the regular reports on financial stability (Cihák 2006). However, there is no explicit meaning of financial stability or systemic risk among central banks (Oosterloo & de Haan 2004). Global economic recovery is highly dependent on accommodative monetary policies in advanced economies, nevertheless extended monetary ease may give rise to excessive risk taking (IMF 2014). A monetary expansion policy and a positive productivity shock increase bank leverage and risk (Angeloni & Faia 2013). Stakeholders (e.g., stockholders, depositors, managers, analysts) frequently use data from financial statements to evaluate the performance of commercial banks. Uniform financial rating system, namely 'CAMELS' (Capital Adequacy, Assets, Management Capability, Earnings, Liquidity, Sensitivity) introduced originally by US regulators, has been increasingly used all over the world to assess the performance of banks (Nimalathasan 2008; Dash & Das 2013; Roman & Şargu 2013; Abdul Rahman & Masngut 2014).

Financial and economic liberalization may potentially open the banks to revitalized business climate, trade, regulation, and joint ventures, but essentially could also trigger undesirable economic and social effects. Ghosh (2005) points out that financial liberalization might lead to propensity to financial crises due to greater freedom to invest in sensitive sectors such as real estate and financial securities, increased exposure to particular sectors and clients, and lowered access to funding for small-scale producers. In the context of financial liberalization in Nepal after mid-1980s, the number of Banking and Financial Institutions (BFIs) in Nepal had grown from 5 in

1985 to 272 in 2011 (NRB 2015a, p. 2), after which the number of BFIs gradually started to decrease due to the enforcement of **Merger Bylaws 2011** (NRB 2011) by Central Bank of Nepal (Nepal Rastra Bank - **NRB**). Merger Bylaws 2011 was issued primarily with an intention to integrate the unwanted high banks density, resolve the liquidity crisis that was unfolding, encourage BFIs to increase the capital through merger, discourage the malicious competition among BFIs, enhance the systemic performance of BFIs, and notably the central bank facilitated rebates, discounts and waivers for banks opting for mergers (NRB 2011).

The paper primarily intends to empirically study about the holistic and systemic performance of all 'Class A' 27 private commercial banks in Nepal from 2012-2015 after the introduction of Merger Bylaws 2011, regardless of whether any Class A private bank have merged with any other BFIs or not. The paper subsequently follows through following sections - part two is about literature review, part three reviews research methodology, part four debates the model and hypothesis, part five presents results, part six discusses conclusions and part 7 recommends from the research findings.

2. Literature Review

Many researchers have conducted studies about the bank mergers, systemic risk, effect on the performance of banks, and in some case understand the motive of the Central Banks. Hosono et al. (2006) investigated the reasons and aftermath effect of the consolidation of co-operative banks in Japan from 1984-2002, having concluded that Mergers and Acquisitions (M&As) has increased the cost efficiency of acquiring banks,

elevated the loan interest rate and increased both profitability and efficiency, although, this did not improve the CAR - Capital Adequacy Ratio of the consolidated [merged] banks relative to its peers, as Return on Assets (ROA) of the consolidated banks were not sufficient to meet the minimum CAR. The banks' mergers analyzed from the interbank money market angle, as Carletti et al. (2007) suggest, could lead to improvements in money market availability, a factor that might produce financial cost advantages and increase reserve holdings, which might essentially have a positive effect on the performance of the banks. Carletti et al. (2007) also suggest that large mergers generated an increase in the expected aggregate liquidity needs, eventually fulfilling the minimum liquidity requirement required by the central banks. Another viewpoint relates to cost efficiency (Beccalli & Frantz 2009) impact of M&A operations influence on the performance of banks; taking a sample of 714 deals involving European Union (EU) acquirers and targets throughout the world from 1991 to 2005, concluded that M&A operations accompany minor decline in Return on Equity (ROE), cash flow return and profit efficiency, but with a noted progress in cost efficiency, which might have a relevant impact in performance.

Somoye (2008) examined the performance of government induced banks consolidation in Nigeria in a post-consolidation period, for the purpose of financial stability, risen due to a credit crisis and transatlantic mortgage financial chaos, concluding that the mergers' consolidation program has not been effective to improve significantly the performance of banks. Somoye (2008) advocates that the process of bank consolidation should be market driven in order to ensure an efficient process in the light of competitiveness in the banking sector. A different view is advocated by Grandin & Saidane (2010) stating that the global financial turmoil has induced the state

intervention to consolidate the banks and underline their soundness. However, the authors argue that M&A normally occurs from private market forces, compelled by the efficiency and profitability of the merged entities, and question if managers might have been induced in their haste to enter into M&A transactions.

Khan (2011) concluded that Indian banks have been positively affected by of M&As during the post liberalization regime. Financial parameters that include Gross Profit Margin, Net Profit Margin, Operating Profit Margin, Return on Capital Employed (ROCE), ROE and Debt-Equity Ratio were considered for measuring performance of banks, having concluded that there have been efficiency gains through M&As, and subsequently passed the benefits to the equity shareholders in the form of dividend. However, Sohini Ghosh & Dutta (2015) observed about 10 M&A deals in Indian financial institutions, between 2000 to 2010, having concluded that there is no significant change in the performance of banks. In another market, Lai et al. (2015) made a comparative analysis of financial ratios of Malaysian local banks to evaluate the impact of bank mergers on profitability, cost reduction, liquidity, leverage and shareholder's equity, having concluded that in this market there was no important improvement in the performance and efficiency of the merged banks.

From the empirical findings of the researches emerged the idea about the most adequate variables to be used in the statistical analysis of the dissertation for analyzing the performance of the 27 privately owned banks in Nepal during the merger wave era between 2012-2015. Notably, some of the indicators implied are ROA, ROE, Capital Ratio/Capital Adequacy Ratio (CAR), Profit Margin, Liquidity Ratio and Leverage Ratio.

3. Research Methodology

The primary focus of this study is to make descriptive and empirical analysis of total performance of all Class A 27 private systemic commercial banks from 2012 to 2015, after Central Bank of Nepal issued 'Bank and Financial Institutions Merger Bylaws 2011'. Over this period, many BFIs have opted for mergers. Mergers were primarily horizontal across different categories of banks, notably in Class A commercial private banks. Horizontal merger happens when one entity acquires other entity within the same line of product or services in the same geographical area to eliminate the competition, and this kind of merger was primarily promulgated by Central Bank of Nepal. Class A banks are classified as those banks whose paid up capital is at least 2 billion Nepali Rupees (NRs), whereas less paid up capital for Class B, C and D categories of banks in decreasing order (NRB 2015c, p. 89), and corresponding to 2015/16 monetary policy of Central Bank of Nepal (NRB 2015b, p. 12), Class A banks are required to raise minimum paid up capital from current 2 billion NRs to 8 billion NRs by 2017, almost 4 times than the level in 2015, and subsequently in similar order for other categories of banks.

The model excludes the 3 State-owned commercial banks out of 30. The reason to choose Class A commercial bank is that these banks represent the majority of total assets and liabilities among all BFIs of Nepal; on the other hand, the reason to exclude the 3 State-owned banks is that two of them are contributors to outlier's effect. As of July 2015, commercial banks absorbed 78.7% of total assets/liabilities followed by development banks - 13.3%, finance Companies - 4.8% and micro-finance development banks - 3.1% (NRB 2015a, p. 3).

3.1 Dependent Variable Selection

The literature researched focus on two common traditional performance indicators that are primarily used in BFIs: ROE and ROA respectively, although, the selection of performance indicator depends on the type of measure of performance. A situation relates to the analysis of the economic measure of performance, including the Economic Value Added (EVA) and Risk-Adjusted Return on Capital (RAROC) indicators, which were considered to be more appropriate, whereas to analyze the market-based measure of performance, the Total Share Return (TSE), Price-Earnings Ratio (P/E), Price-Book Value Ratio (P/B) and Credit Default Swap (CDS) might be more appropriate. Share investors in Nepal appear to take investment in equity as a hedge against inflation and contemplate stock as an alternative financial instrument (Shrestha & Subedi 2014).

As the literature consistently shows (Hosono et al. 2006; Beccalli & Frantz 2009; Khan 2011; Sohini Ghosh & Dutta 2015; Lai et al. 2015), the study assumes ROE as a performance measurement of the shareholder value. ROE has fundamentally been one of the key indicators for measuring performance, and applied to allot capital inside and across divisions.

3.2 Independent Variable Selection

Selection of independent variable is in line with the Basel II (BCBS 2006) regulatory requirement about capital, liquidity and asset quality, which is also followed standard by the Central Bank of Nepal (NRB 2010) . Similarly, we take into account about the measures of income and size of the banks to realize the outcome of systemic merger synergies.

Capital Adequacy Ratio (CAR)

Capital adequacy is employed as the measure of bank's capital to risk-weighted assets (BCBS 2006). CAR is primarily used as the regulatory capital ratio. Bank's capital could be expressed as Tier 1, Tier 2 and if necessary Tier 3 capital - Tier 1 capital consists shareholders' equity and disclosed reserves, Tier 2 capital consists undisclosed reserves, revaluation reserves, general provisions/general loan-loss reserves, hybrid debt capital instruments and subordinated term debt, and Tier 3 consists short-term subordinated debt covering market risk (BCBS 2006). In 2015, the minimum CAR for Class A commercial bank is 10% in Nepal with Tier 1 Capital at least 6% (NRB 2015d, p. 13). Bateni et al. (2014) found positive and significant relationship between ROE, ROA and CAR in Iranian private banks from 2006-2012. Abiola & Olausi (2014) also found that there is significant impact between ROE, ROA and CAR in Nigerian commercial banks from 2005-2011. Valkanov & Kleimeier (2007) investigated about the role of regulatory capital in mergers of banks, and they found that US targets are more capitalized than their acquirers, and this aids US banks to raise their capital levels above the regulatory capital to avoid inquiry. Based on Central Bank of Nepal's laws and directives (NRB 2010; NRB 2011), we expect that CAR has positive impact on systemic performance of banks in Nepal in the merger wave era (2012-2015).

Statutory Liquidity Ratio (SLR)

SLR is the ratio of measure of liquid assets to Net Demand and Time Liabilities - NDTL (Reserve Bank of India 2015). Demand liabilities are defined as the liabilities that banks are liable to pay on being demanded by the customer – example: savings account, whereas time liabilities are defined as the liabilities that banks are liable to pay after a certain period of time – example: 2 years fixed account (Reserve Bank of India

2015). It is something that banks have to maintain a specified proportion of their NDTL in the form of liquid assets like cash and gold on top of cash reserve. In general, banks in South Asia use this ratio to check the expansion of bank credit, to ensure the solvency and liquidity capability of banks, and to encourage the banks to invest in safer assets like government bonds. In 2015, the minimum required SLR for Class A commercial bank is 12% in Nepal (NRB 2015d, p. 14). Arif & Nauman Anees (2012) found negative relationship between liquidity risk and performance of 22 commercial banks in Pakistan from 2004-2009. Also, Lartey et al. (2013) examined the relationship between liquidity ratio and banks' profitability listed on Ghana Stock Exchange, and found very weak relationship between them. Based on Central Bank of Nepal's laws and directives (NRB 2010; NRB 2011), we expect that SLR has positive impact on systemic performance of banks in Nepal in the merger wave era (2012-2015).

Non-Performing Loan Ratio (NPLR)

Non-Performing Loan (NPL) is the loan that is being defaulted or is in the process of being default, however, there is an issue worldwide about the standard and proper definition of NPL (Bholat et al. 2016). Higher NPLR generally implies that any financial institution is more susceptible to credit risk (Kauko 2012; Melecky 2014; Akinlo & Emmanuel 2014). Ekanayake et al. (2013) found that NPL could be attributed to both macroeconomic situation and bank specific factors in Sri Lankan commercial banking sector from 1999 to 2012. Similarly, Makri et al. (2014) found strong correlation between NPL, ROE and CAR in Eurozone banks from 2000-2008, the reason to justify the Eurozone financial crisis. Knapp & Gart (2014) inspected the post-merger changes in the credit risk of the banks, and found that there are notable changes in the mix of loan categories in the loan portfolio after a merger, and NPL rate rises

considerably after the merger. Based on Central Bank of Nepal's laws and directives (NRB 2010; NRB 2011), we expect that NPLR has negative impact on systemic performance of banks in Nepal in the merger wave era (2012-2015).

Net Interest Margin (NIM)

According to Financial Times, NIM is 'the difference between the interest that a bank pays to those putting money in the bank and what it gets from those taking out loans' (Financial Times 2016). NIM is one type of income indicator in banks which helps in investigating investment decisions compared to the debt conditions, meaning that the difference of interest between borrowing and lending. López-Espinosa et al. (2011) found that the volatility of interest rate is positively and strongly related to NIM. Likewise, Naceur & Goaid (2008) investigated that the characteristics of individual bank explains substantial amount of variation in NIM, and banks which have higher capital also have higher NIM and profitability. Based on Central Bank of Nepal's laws and directives (NRB 2010; NRB 2011), we expect that NIM has positive impact on systemic performance of banks in Nepal in the merger wave era (2012-2015).

Bank Size (BS)

As a rule of thumb, bank size is measured as the natural log of total assets, similar to studies conducted by Gul et al. (2011) and Laeven et al. (2016). Bank earnings volatility, lending behavior, diversification of portfolios, and hence overall performance might be affected by bank size (Pais & Stork 2013). Intuitively, M&As increases the size of acquiring bank. Sohail et al. (2013) found a positive and significant relationship between bank size and performance of banks. Based on Central Bank of Nepal's laws and directives (NRB 2010; NRB 2011), we expect that BS has positive impact on systemic performance of banks in Nepal in the merger wave era (2012-2015).

4. The Model and Hypothesis

4.1 The Model

The concept of multiple linear regression has been applied to form the model. The general equation for the model is presented below:

$$Y = \beta_0 + \beta * X + \varepsilon$$

Here, Y is the dependent variable, β_0 is constant, β is the coefficient of the explanatory variable, X is the explanatory variable and ε is the error term. Similarly, applying above model to make analysis on the performance of bank, we start with the following model.

$$ROE = \beta_0 + \beta_1 * CAR + \beta_2 * SLR + \beta_3 * NPLR + \beta_4 * NIM + \beta_5 * BS + \varepsilon$$

β_0 : constant (intercept)

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$: Slope representing the degree that bank performance changes as the independent variable changes by one-unit variable.

ROE: Return on Equity

CAR: Capital Adequacy Ratio

SLR: Statutory Liquidity Ratio

NPLR: Non-Performing Loans Ratio

NIM: Net Interest Margin

BS: Bank size (natural log of total assets in thousands)

ε : error term

4.2 Hypothesis

Hypothesis 1: Bank merger increases CAR, which has positive and significant impact on the bank's performance systemically.

Hypothesis 2: Bank merger increases SLR, which has positive and significant impact on the bank's performance systemically.

Hypothesis 3: Bank merger absorbs NPL, which has negative and significant impact on the bank's performance systemically.

Hypothesis 4: Bank merger increases NIM, which has positive and significant impact on bank's performance systemically.

Hypothesis 5: Bank merger increases BS, which has positive and significant impact on bank's performance systemically.

5. Results

5.1 Descriptive Statistics

Table 1 presents the descriptive statistics for variables, computed in SPSS 23. Data from 2012-2015 is taken from Central Bank of Nepal's website.

Table 1: Descriptive statistics for n = 112

Variable	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
ROE	-278.73%	33.17%	10.10%	31.06%	-7.75	69.23
CAR	4.07%	24.39%	12.99%	3.21%	1.19	3.11
SLR	15.09%	53.50%	27.05%	6.12%	1.75	5.16
NPLR	0.00%	36.20%	2.54%	4.41%	5.65	36.67
NIM	1.71%	8.20%	3.40%	1.01%	2.05	6.91
BS	6.75	8.06	7.53	0.26	-0.19	-0.06

Note: Bank Size (BS) as a natural log of total assets in thousands

The descriptive statistics shows high variation between maximum and minimum value for ROE, and as well certain variation for CAR, SLR and NPLR, well depicted by the minimum value, maximum value and standard deviation. Apparently, 2 private banks out of 27, namely Grand Bank Limited and Kist Bank Limited are the main contributors to this variation. From the analyzed data, it is seen that in 2014 and 2015 Grand Bank Limited reported a huge loss with significant portion of NPL, and had negative ROE of -278.73% and -89.74% respectively, while Kist Bank Limited having a loss in 2013 and 2014 posted a profit in 2015 after being merged with other banks, and subsequently being renamed as Prabhu Bank Limited while retaining Class A status.

In average, banks reported ROE of 10.10% which depicts bank's profitability in merger wave era. Negative skewness for ROE shows that bank's median and mode ROE are more than its mean, and high value of positive kurtosis further conveys that the distribution is peaked. CAR of 12.99% during 2012-2015, which is above the requirement of 10% (NRB 2015d, p. 13) shows that banks have been effective in following central bank merger directives (NRB 2011) and Basel II accords (NRB 2010). Similarly, banks reported average SLR of 27.05%, which is higher than central bank requirement of 12%. (NRB 2015d, p. 14). This confers that the private banks in Nepal are in highly liquid state. Nevertheless, the volatility of NPL questions about the credit asset quality of the banks. Variation in NIM and BS remained less in comparison to other variables evidently shown by the standard deviation of 1.01% and 0.26 respectively. While CAR, SLR, NPLR and NIM have positive values for both skewness and kurtosis, BS has negative values. This observes that $\text{mean} > \text{median} > \text{mode}$ for CAR, SLR, NPLR and NIM with peaked distribution, whereas $\text{mean} < \text{median} < \text{mode}$ for BS with flatter distribution.

The high variation in skewness and kurtosis for dependent and independent variables in Table 1 indicate that the distributions are not normally distributed, which means that the homogeneity of variables are not achieved and assumptions of parametric testing are violated. Therefore, to fetch the appropriate output, we have to proceed with non-parametric statistics assuming any kind of distribution.

5.2 Spearman Correlation Analysis

Mathematically, ‘Pearson correlation analysis evaluates the linear relationship between two continuous variables assuming normal distribution, whereas Spearman correlation analysis evaluates the monotonic relationship between two continuous or ordinary variables assuming any kind of distribution’ (Statsoft 2016), as in ours case. Monotonic relationship means that the variables incline to change each other respectively, but not necessarily at a constant rate. Technically, to understand the effect size of Spearman correlation analysis, ‘coefficients between .10 and .29 represent a small association, coefficients between .30 and .49 represent a medium association, and coefficients above .50 represent a large association’. In general, coefficient below 0.5 indicates the absence of high monotonic relationship.

Table 2 has been computed in SPSS 23 to check the monotonic relationship between dependent and independent variables.

Table 2: Spearman correlation coefficients of variables for n=112

Variables	ROE	CAR	SLR	NPLR	NIM	BS
ROE	1	-0.171	0.191	-0.105	0.416	0.691
CAR		1	0.127	-0.244	0.139	-0.341
SLR			1	0.143	0.210	0.094
NPLR				1	0.264	0.086
NIM					1	0.348
BS						1

In Table 2, it is seen that BS has slightly large association with ROE, whereas all other variables have either small or medium association with each other. We are neglecting the marginal impact of spearman correlation between BS and ROE in our multiple regression analysis. ROE is positively correlated with SLR and NIM, whereas negatively correlated with CAR and NPLR. This implies that performance of bank increases if value for SLR, NIM and BIS increases, while performance of bank decreases if value for CAR and NPLR increases.

5.3 Multiple Regression Analysis

Table 3 presents the significance of regression model, whereas Table 4 presents the regression beta coefficients, statistical significance of independent variables and collinearity statistics. All values are computed in SPSS 23.

Table 3: Model Significance

$$ROE = \beta_0 + \beta_1 * CAR + \beta_2 * SLR + \beta_3 * NPLR + \beta_4 * NIM + \beta_5 * BS + \epsilon$$

R ²	Adjusted R ²	Std. Error	F	Sig.	Durbin-Watson
.476	.452	23.00260%	19.288	.000	2.485

Table 3 evidences that our model is statistically significant for a level of 1% significance (F=19.288; p=.000). The variance of independent variable is explained in 45.2% (Adj. R²) by the dependent variables which depicts how the model fits with the phenomenon under analysis. In statistical analysis, ‘Durbin-Watson tests for autocorrelation in the residuals from a statistical regression analysis, whose value ranges from 0 to 4’ (Statsoft 2016). A value of 2 indicates no autocorrelation in the sample. Values that are approaching toward 0 indicate positive autocorrelation, whereas values toward 4 indicate negative autocorrelation. In the model, value of 2.485 indicates

that residuals tend to have negative autocorrelation, but not high. We neglect this marginal impact.

Table 4: Regression coefficients

	Beta	T	Sig.	Collinearity Statistics	
				Tolerance	VIF
Constant		-1.409	.162		
CAR	.047	.459	.647	.475	2.107
SLR	.038	.522	.602	.956	1.046
NPLR	-.615	-6.864	.000**	.616	1.624
NIM	.196	2.111	.037*	.574	1.741
BS	.137	1.353	.179	.479	2.086

* $p < 0.05$; ** $p < 0.01$

Table 5 summarizes the expected and real outcome of independent variables with level of significance.

Table 5: Summary of Outcomes

Independent Variables	Expected Outcome	Actual Outcome	Significance
CAR	Positive	Positive	not significant
SLR	Positive	Positive	not significant
NPLR	Negative	Negative	significant**
NIM	Positive	Positive	significant*
BS	Positive	Positive	not significant

* $p < 0.05$; ** $p < 0.01$

‘The Variance Inflation Factor (VIF) is a measure that checks the impact of collinearity among the variables under consideration in a regression model’, defined in statistics (Statsoft 2016). The VIF is computed as the reciprocal of Tolerance. The generally accepted rule is that VIF shouldn’t be greater than 10. Table 4 indicates that VIF values are very smaller than 10, which confers us an idea that the collinearity among regressed variables are smaller.

In Table 4, it is seen that CAR has positive coefficient in the merger era, but statistically not significant ($t=.459$; $p=.647$). It is expected that CAR has positive relationship with bank's performance, however, the hypothesis that CAR has significant effect on the bank's performance systemically in the merger wave era has been rejected. This questions whether banks in Nepal are capable to absorb any unprecedented level of loss, protect its depositors, and promote the stability and efficiency of the financial system systemically. The study has been similar to Hosono et al. (2006) finding that even though M&A increased the bank's profitability, it didn't improve the capital ratio. However, this is in contrary to Bateni et al. (2014) and Abiola & Olausi (2014) findings regarding statistical significance.

Second hypothesis that bank mergers increases SLR, which has significant impact on bank's performance systemically has been rejected ($t=.522$; $p=.602$), however the positive coefficient indicates that SLR has positive relationship with the bank's performance, as expected. Depositing more liquid assets in the Central Bank might not be a favorable condition for banks, however systemically this might be essential to ensure the finance stability. One of the reasons why Central Bank of Nepal pushed Merger Bylaws 2011 (NRB 2011) was about the liquidity crisis that was unfolding starkly. Nevertheless, statistically not significant SLR implies that even though banks might have maintained regulated liquidity, this has not been substantial to advance the systemic performance of banks. This finding is closely related to Lartey et al. (2013) finding. As Carletti et al. (2007) published that big mergers have behavior to increase the expected aggregate liquidity needs and eventually fulfil the liquidity requirement as provisioned by the Central Bank, which is also reported in our study, however, this doesn't improve the systemic performance of banks.

Our hypothesis that bank mergers absorb NPL systemically, which has negative and significant impact on bank's performance is significant ($t=-6.864$; $p=.000$) at 1% significance level with higher negative regression coefficient. This is in line with the Somoye (2008) finding that banks consolidation risen due to credit crisis and transatlantic mortgage financial chaos has not been effective to improve the performance of banks. This fundamentally articulates that being statistically significant, bank mergers absorb NPL systemically, but this doesn't improve the systemic performance of banks. Questions arise about the credit quality of the banks whether they are appropriately following the Basel II risk requirements as mandated by the Central Bank of Nepal (NRB 2010). Essentially, credit risk management practices need a greater scrutiny.

Our hypothesis about NIM is evidenced to be statistically significant ($t=2.111$; $p=.037$) at 5% significance level as expected. This means that bank mergers have impact on NIM systemically, which is positive and significant. We can also infer that banks have been able to exploit the revenue synergies coming from mergers. Thus, we can make a correspondence that banks in Nepal are more dependent on the interest income, and interest spread is normally higher to yield large profits as López-Espinosa et al. (2011) published that the volatility of interest rate is positively and strongly related to NIM. Likewise, mergers tend to increase the capital and similar to Naceur & Goaid (2008) findings, higher capital have higher NIM and profitability.

Coefficient for BS after merger is expected to be positive, which is evidenced in Table 4, however statistically not significant ($t=1.353$; $p=.179$). This underlines that even though bank mergers increase the bank size, this doesn't improve the performance of banks systemically in the merger wave era and increase in bank size through mergers

have not been efficient to realize the cost synergies and exploit the economies of scale. This is contrasting to Sohail et al. (2013) finding.

6. Conclusion

This study is primarily conducted to distinguish the holistic and systemic performance of all 27 private commercial 'Class A' banks in Nepal resulting from the merger wave era 2012-2015 after Central Bank of Nepal published the Merger Bylaws (NRB 2011). Hypothesis about independent variables i.e. NPLR (negative and significant effect) and NIM (positive and significant effect) has been statistically significant, while other variables tested don't have statistical significance.

Even though the performance of banks is explained fairly (45.2%) by the independent variables under analysis, the rejection of hypothesis about CAR, SLR and BS raises uncertainties. The high negative coefficient NLPR further increases the stake. The study realizes that banks in Nepal are vulnerable to absorb the unprecedented credit shock and protect its stakeholders in the merger era. Even though banks have higher liquidity, this has not been beneficial in improving the performance of banks, and negative regression coefficient of NLPR suggests that banks are very susceptible to credit risk. This empirical study raises doubt about the investment decisions taken by bank managers has yielded appropriate returns, given the context of higher SLR with higher NPL. The study also raises doubts whether banks are following a proper risk management process, and as well as the externally mandated by Central Bank of Nepal (NRB 2010).

The empirical study reveals that privately-owned 'Class A' banks in Nepal in the merger era (2012-2015) are dependent on the interest income as significant portion of

their revenues, making them exposed to interest rate risk. Any change in interest rates might have direct impact in revenues, although the research reveals that, banks have been able to leverage revenues' synergies resulting from the mergers, a number of which was horizontal mergers. The study also shows that increase in bank size after mergers doesn't have statistical significance in improving performance. This questions whether Central Bank of Nepal's motives for issuing Merger Bylaws in 2011 (NRB 2011) has been fulfilled, and mergers' synergies for cost has been extracted until 2015. Some of the constraints for this empirical study include the short time range, small sample size, limited availability of data in English, perform analysis across other entry and understand the change, as well as the analysis of total systemic performance of private banks in the merger wave era rather than only the individual merged banks.

In conclusion, banks in Nepal are dependent on the interest income, and despite having advantage of higher liquidity, non-performing loans are impacting negatively the performance of banks in this merger wave. We conclude that banks should comply with prudent risk management approach to drive their performance and profitability in foreseeable future, and protect the interest of their stakeholders in a robust fashion.

7. Recommendation to the Body of Knowledge

Our study presents the following recommendations based on the empirical substantiation about the holistic and systemic performance of all private commercial banks in Nepal in the merger wave era from 2012 to 2015.

The risk appetite of Nepalese private banks seems vulnerable in the merger era, as indicated by the negative beta coefficient of NPLR. This primarily indicates that banks

are likely to report higher loan loss provision than in normal case, which eventually affects the ROE and banks' performance. While Central Bank of Nepal have tightened the rules about over exposure to sensitive sector such as housing and real state, it should further scrutinize and supervise the banks if they are strictly following its directives and Basel II Pillar I regulatory requirements (BCBS 2006; NRB 2010). Although Central Bank of Nepal has implemented supervisory mechanism (NRB 2013) which corresponds to Basel II Pillar 2 requirement (BCBS 2006), it should further push to standardize the framework for supervisory mechanism. For example, Supervisory Review and Evaluation Process – SREP (EBA 2014) implemented EU wide to supervise the systemic member banks in EU states, 'whose overall purpose is to warrant that financial institutions have adequate arrangements, strategies, capital and liquidity to ensure a sound management and coverage of their risks, to which they are or might be exposed, including those revealed by stress testing and risks institution may pose to the financial system' (EBA 2014). Central Bank of Nepal has already assessed the implementation of Basel III (BCBS 2010) for new capital regulation in 2015/16, and highlighted that there will be need of additional capital for buffers like capital conservation buffer and countercyclical buffer along with liquidity monitoring framework although banks in Nepal are maintaining higher than the minimum capital ratio (NRB 2015e). We recommend Central Bank of Nepal to make further push towards it to make financial institutions more robust to absorb the unprecedented shock in future.

The study reveals that banks in the merger wave era are more dependable on interest incomes. Although high interest spread is profitable for banks, this isn't the sustainable way of generating the income. For example, European banks are struggling due to low

or even negative interest rate (ECB 2016). Therefore, Central Bank of Nepal should strategize to push the banks to consider viable and sustainable business model where the earnings from interest plays a minor role, and essentially mitigate any kind of risk in economic meltdown scenarios.

Banks internal governance and risk management procedures have significant effects on their risk profile and business model sustainability (Aebi et al. 2012). Like Single Supervisory Mechanism – SSM framework (ECB 2014) implemented by ECB, Central Bank of Nepal should always have high and specific expectations regarding bank’s boards, and expect the board to demonstrate its capacity for independent challenging and oversight of senior management. The board should essentially have risk perspective and forward looking approach on strategic discussions.

We believe this study would be useful to academicians, researchers, Central Bank and banks in Nepal. Moreover, this study could also be used as a source of knowledge in further research about bank’s performance and profitability not only in the merger era from 2012 to 2015, but also essentially across larger time-period with cross analysis.

8. References

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